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(71) Applicant and
(72) Inventor: CARPENTER, Brent, L. [US/US]; 209 Mulligan Lake Drive, Mead, CO 80542 (US).

(74) Agent: FISHMAN, Daniel, N.; Lathrop & Gage LC, 4845 Pearl East Circle, Suite 300, Boulder, CO 80301 (US).

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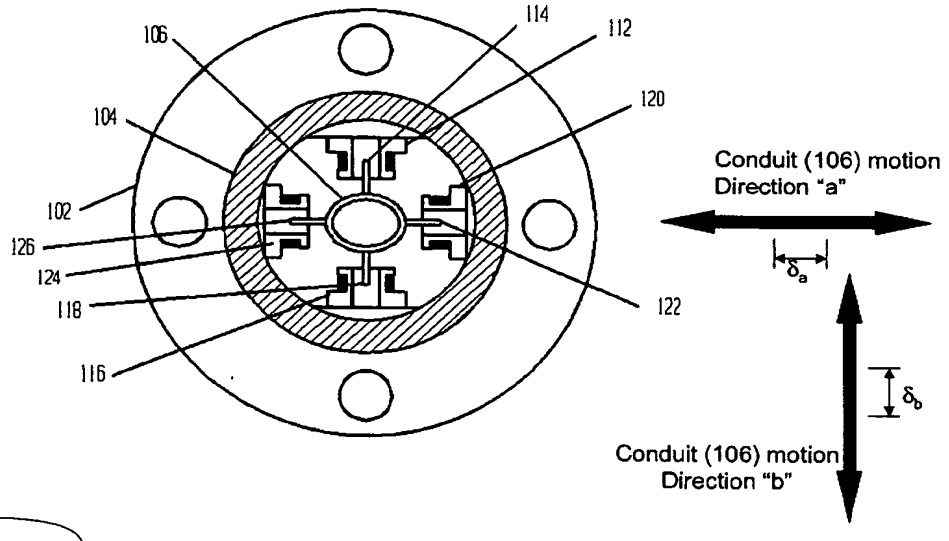
(54) Title: PRECISE PRESSURE MEASUREMENT BY VIBRATING AN OVAL CONDUIT ALONG DIFFERENT CROSS-SECTIONAL AXES



(57) Abstract: A conduit (106), with geometry designed to enhance pressure sensitivity, is vibrated at resonance in two modes along different cross-sectional axes (a, b). Measuring the change in the frequency ratio squared of the modes yields a substantially linear relationship to pressure that is substantially immune to other material properties and other environmental factors. Moments of inertia in different cross-sectional axes are related to pressure as a result of the elliptical or oral cross section of the conduit (106).

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